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Office Memorandum • UNITED STATES GOVERNMENT

TO : The Files

DATE: 23 April 1957

FROM :

[REDACTED]

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SUBJECT: Contract RD-91, Marine Crystal Video

1. On 27 and 28 March 1957, I visited the plant of the [REDACTED] to determine status of rework on the Marine Video System. Those contacted at [REDACTED] were:

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The progress of rework has been carried on at an accelerated rate, and delivery of the unit is assured for 1 April 1957. The following items have been performed:

- a. The console has been completely rewired and tested.
- b. The wiring of the antenna structure has been completed and tested.
- c. The combining amplifier boards have been built, tested and individually calibrated.
- d. All deflection boards have been rebuilt, tested and individually calibrated.
- e. The blocking oscillator for the calibration circuit has been built and tested.
- f. The amplifier for checking the noise output of the crystals has been built and tested (Note: Formerly the ninth CRT plug-in unit was used as a spare, and the plug at the back of the unit was not wired. When it was elected to remove the RF calibrator in its entirety from this system, some means of checking activity of the crystals and pre-amps became necessary. [REDACTED] suggested using this ninth unit as a calibration CRT. The concept was approved and subsequently the circuits were worked out, tested, and found to be satisfactory.)

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- g. The cathode ray tube coupling boards have been built and tested.
- h. The interconnecting cables between the battery, the console and the antenna have been completely reworked. Shielded cables are being used for the crystal circuits.

2. A series of tests were conducted on the antenna unit in which a calibrated R.F. signal was fed into each channel at the antenna, and the output from the pre-amp of that channel was noted. Variation between channels within a given band was always less than 3 db, except in such instances where a defective crystal was found, in which case the variation amounted to ten or twelve db. Replacement of the crystal brought variation back within three db limit.

3. Present scheduling indicates that delivery of the system for the 1 April deadline will be met, unless completely unforeseen obstacles arise. However, all component items necessary for the complete job are on hand, and preliminary testing of all circuit changes are complete. Final assembly and testing is all that remains to be done.

4. Liaison with Naval Research Laboratory has been resumed for further testing of the system at Chesapeake Bay Annex. It is expected that the complete system, together with the Ampex 814 recorder and a SLA-2 (or SLA-1A) analyzer will be installed aboard the picket boat the first of April, and tests are expected to get underway on Wednesday, 3 April 1957. [] has indicated that they desire to have certain of their people present for these tests.

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